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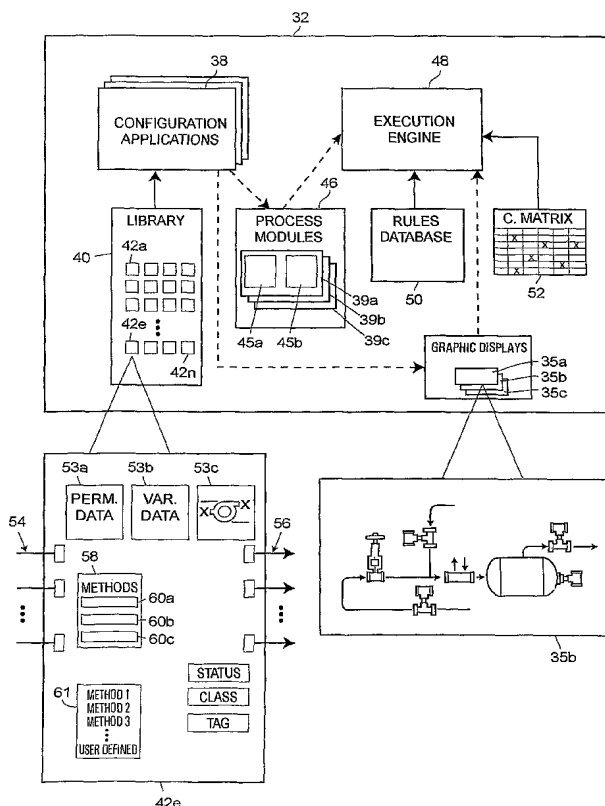
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(54) Title: INTEGRATION OF PROCESS MODULES AND EXPERT SYSTEMS IN PROCESS PLANTS



(57) **Abstract:** A process control system element for use in a process plant includes a process module, which represents a logical unit in the process plant, integrated with an expert module capable of detecting and/or mitigating abnormal situations associated with the logical unit. The process module may include a plurality of process objects, each process object representing a corresponding physical entity in the process plant. At least some of the process objects may include simulation capabilities to simulate the corresponding physical entities. The expert module may be adapted to detect at least one abnormal situation associated with the logical unit, and may be communicatively coupled to the process module to receive data from the process module during operation of the process module. Because the expert module is integrated with the process module, a user can more easily configure the expert module to detect and/or mitigate abnormal situations associated with the logical unit.



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